

Application No. 10/530,130

Reply to Office Action

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application.

1. (Currently Amended) A method of making a heat-sensitive lithographic printing plate precursor comprising the steps of
 - (i) providing a web of a lithographic support having a hydrophilic surface;
 - (ii) applying a coating comprising a phenolic resin on the hydrophilic surface of the web;
 - (iii) drying the coating by supplying heat to the coated web;
 - (iv) an active cooling step wherein the web temperature is reduced at an average cooling rate which is higher than if the web would be kept under ambient conditions ~~but not higher than~~ and varies between 0.5 and 30°C/s; and
 - (v) winding the precursor on a core or cutting the precursor into sheets.
2. (Previously Presented) The method according to claim 1 wherein the average cooling rate is not higher than 20°C/s.
3. (Previously Presented) The method according to claim 1 wherein the average cooling rate is not higher than 10°C/s.
4. (Previously Presented) The method according to claim 1 wherein at the beginning of the cooling step the web temperature is higher than T_g , the glass transition temperature of the coating comprising the phenolic resin, and wherein during the cooling step the web temperature is reduced from T_1 to T_2 , T_1 being higher than T_g and T_2 being lower than T_g , at an average cooling rate which is lower than 10°C/s.
5. (Previously Presented) The method according to claim 4 wherein during the cooling step the web temperature is reduced
 - in a first phase down to T_1 at an average cooling rate of at least 10°C/s; and
 - in a second phase from T_1 to T_2 at an average cooling rate which is lower than 10°C/s.

Application No. 10/530,130

Reply to Office Action

6. (Previously Presented) The method according to claim 4 wherein during the cooling step the web temperature is reduced
- in a first phase down to T1 at an average cooling rate of at least 10°C/s; and
 - in a second phase from T1 to T2 at an average cooling rate which is lower than 10°C/s; and
 - in a third phase from T2 to about ambient temperature at an average cooling rate of at least 10°C/s.
7. (Previously Presented) The method according to claim 4 wherein the cooling from T1 to T2 proceeds at an average cooling rate which is lower than 5°C/s.
8. (Previously Presented) The method according to claim 4 wherein T1 is Tg+20°C and T2 is Tg-20°C.
9. (Previously Presented) The method according to claim 4 wherein T1 is Tg+10°C and T2 is Tg-10°C.
10. (Previously Presented) The method according to claim 1 further comprising a heating step between step (iii) and step (iv), wherein during said heating step the web temperature is maintained above the glass transition temperature of the phenolic resin during a period of between 0.1 and 60 seconds.
11. (Previously Presented) The method according to claim 2 further comprising a heating step between step (iii) and step (iv), wherein during said heating step the web temperature is maintained above the glass transition temperature of the phenolic resin during a period of between 0.1 and 60 seconds.
12. (Previously Presented) The method according to claim 3 further comprising a heating step between step (iii) and step (iv), wherein during said heating step the web temperature is maintained above the glass transition temperature of the phenolic resin during a period of between 0.1 and 60 seconds.

Application No. 10/530,130

Reply to Office Action

13. (Previously Presented) The method according to claim 11 wherein during the cooling step the web temperature is reduced

- in a first phase down to T1 at an average cooling rate of at least 10°C/s; and
- in a second phase from T1 to T2 at an average cooling rate which is lower than 10°C/s.

14. (Previously Presented) The method according to claim 12 wherein during the cooling step the web temperature is reduced

- in a first phase down to T1 at an average cooling rate of at least 10°C/s; and
- in a second phase from T1 to T2 at an average cooling rate which is lower than 10°C/s.

15. (Previously Presented) The method according to claim 11 wherein during the cooling step the web temperature is reduced

- in a first phase down to T1 at an average cooling rate of at least 10°C/s; and
- in a second phase from T1 to T2 at an average cooling rate which is lower than 10°C/s; and
- in a third phase from T2 to about ambient temperature at an average cooling rate of at least 10°C/s.

16. (Previously Presented) The method according to claim 12 wherein during the cooling step the web temperature is reduced

- in a first phase down to T1 at an average cooling rate of at least 10°C/s; and
- in a second phase from T1 to T2 at an average cooling rate which is lower than 10°C/s; and
- in a third phase from T2 to about ambient temperature at an average cooling rate of at least 10°C/s.

17. (Previously Presented) The method according to claim 5 wherein the cooling from T1 to T2 proceeds at an average cooling rate which is lower than 5°C/s.

Application No. 10/530,130

Reply to Office Action

18. (Previously Presented) The method according to claim 6 wherein the cooling from T1 to T2 proceeds at an average cooling rate which is lower than 5°C/s.

19. (Previously Presented) The method according to claim 5 wherein T1 is Tg+20°C and T2 is Tg-20°C.

20. (Previously Presented) The method according to claim 6 wherein T1 is Tg+20°C and T2 is Tg-20°C.

21. (Previously Presented) The method according to claim 7 wherein T1 is Tg+20°C and T2 is Tg-20°C.

22. (Previously Presented) The method according to claim 5 wherein T1 is Tg+10°C and T2 is Tg-10°C.

23. (Previously Presented) The method according to claim 6 wherein T1 is Tg+10°C and T2 is Tg-10°C.

24. (Previously Presented) The method according to claim 7 wherein T1 is Tg+10°C and T2 is Tg-10°C.

25-29. (Canceled)

30. (Previously Presented) The method according to claim 4 further comprising a heating step between step (iii) and step (iv), wherein during said heating step the web temperature is maintained above the glass transition temperature of the phenolic resin during a period of between 0.1 and 60 seconds.

31. (Previously Presented) The method according to claim 5 further comprising a heating step between step (iii) and step (iv), wherein during said heating step the web temperature is maintained above the glass transition temperature of the phenolic resin during a period of between 0.1 and 60 seconds.

Application No. 10/530,130

Reply to Office Action

32. (Previously Presented) The method according to claim 6 further comprising a heating step between step (iii) and step (iv), wherein during said heating step the web temperature is maintained above the glass transition temperature of the phenolic resin during a period of between 0.1 and 60 seconds.

33. (Previously Presented) The method according to claim 7 further comprising a heating step between step (iii) and step (iv), wherein during said heating step the web temperature is maintained above the glass transition temperature of the phenolic resin during a period of between 0.1 and 60 seconds.

34. (Previously Presented) The method according to claim 8 further comprising a heating step between step (iii) and step (iv), wherein during said heating step the web temperature is maintained above the glass transition temperature of the phenolic resin during a period of between 0.1 and 60 seconds.

35. (Previously Presented) The method according to claim 9 further comprising a heating step between step (iii) and step (iv), wherein during said heating step the web temperature is maintained above the glass transition temperature of the phenolic resin during a period of between 0.1 and 60 seconds.

36. (Canceled)

37. (Previously Presented) The method according to claim 17 further comprising a heating step between step (iii) and step (iv), wherein during said heating step the web temperature is maintained above the glass transition temperature of the phenolic resin during a period of between 0.1 and 60 seconds.

38. (Previously Presented) The method according to claim 18 further comprising a heating step between step (iii) and step (iv), wherein during said heating step the web temperature is maintained above the glass transition temperature of the phenolic resin during a period of between 0.1 and 60 seconds.

Application No. 10/530,130

Reply to Office Action

39. (Previously Presented) The method according to claim 19 further comprising a heating step between step (iii) and step (iv), wherein during said heating step the web temperature is maintained above the glass transition temperature of the phenolic resin during a period of between 0.1 and 60 seconds.

40. (Previously Presented) The method according to claim 22 further comprising a heating step between step (iii) and step (iv), wherein during said heating step the web temperature is maintained above the glass transition temperature of the phenolic resin during a period of between 0.1 and 60 seconds.